Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Request by Progeny LMS, LLC for Waiver of	)	
Certain Multilateration Location and	)	
Monitoring Service Rules	)	WT Docket No. 11-49
	)	
Progeny LMS, LLC Demonstration of	)	
Compliance with Section 90.353(d) of the	)	
Commission's Rules	)	

THE PART 15 COALITION REPLY TO OPPOSITION TO PETITIONS FOR RECONSIDERATION

Pursuant to 47 C.F.R. § 1.106, the Part 15 Coalition ("Coalition"), through counsel, hereby replies to the Opposition of Progeny LMS, LLC ("Progeny") (the "Opposition").[1]

The Coalition and five other parties filed Petitions for Reconsideration[2] of the Federal Communications Commissions ("FCC" or "Commission") order allowing Progeny to begin commercial service ("Order").[3] Each Petition detailed significant

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[1] *In the Matter of Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules; Progeny LMS, LLC Demonstration of Compliance with Section 90.353(d) of the Commission's Rules*, Opposition of Progeny LMS, LLC, WT Docket No. 11-49 (filed July 19, 2013) ("Opposition").

[2] Petition for Reconsideration of the Part 15 Coalition, WT Docket No. 11-49 (filed July 8, 2013) ("Coalition Petition"); Petition for Reconsideration of the Wireless Internet Service Providers Association, WT Docket No. 11-49 (filed July 8, 2013) ("WISPA Petition"); Petition for Reconsideration of Silver Spring Networks, Inc., WT Docket No. 11-49 (filed July 8, 2013) ("Silver Spring Petition"); Petition for Reconsideration of Plantronics, Inc., WT Docket No. 11-49 (filed July 8, 2013) ("Plantronics Petition"); Petition for Reconsideration of the Utility Trade Associations, WT Docket No. 11-49 (filed July 8, 2013) ("Utility Petition"); and Petition for Reconsideration and Petition to Deny of Skybridge Spectrum Foundation, et. al, WT Docket No. 11-49 (filed July 8, 2013) ("Skybridge Petition").

[3] *In the Matter of Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules; Progeny LMS, LLC Demonstration of Compliance with Section 90.353(d) of the Commission's Rules*, Order, WT Docket No. 11-49 (rel. June 6, 2013) ("Order").

concerns regarding the Commission's rationale for its decision, including the application of new legal standards without prior notice and opportunity for comment. Progeny, in its Opposition, goes to great lengths to explain, interpret and defend the Commission's Order, yet offers no valid reason why the Commission should not reconsider and overturn the Order.

DISCUSSION

The crux of the problem is that the Progeny Order rests on faulty legal analyses and unfounded or mistaken factual conclusions. While Progeny attempts to make up for the deficiencies of the Order, the fact remains that the Order does not reflect a reasoned interpretation or application of the FCC rules or policy with regard to the 902-928 MHz unlicensed band. The Commission has, without notice and opportunity for comment, effectively eliminated its requirement that Multilateration Location Monitoring Service ("M-LMS") licensees must not "degrade, obstruct, or interrupt" unlicensed users operating in the 902-928 MHz band. Simply stated, the Order allows the degradation, obstruction, and interruption of devices that intensively and successfully use this unlicensed band. The Commission reached this result on the basis of questionable unilateral testing by Progeny, which was contrary to Commission requirements, and speculative conclusions about Progeny's system design and the ability of unlicensed devices to work around Progeny-generated interference. The Commission, therefore, must reconsider the Order.[4]

A. The Order Does Not Reflect a Reasoned Interpretation of the Commission's Rules.

The only relevant question before the Commission was whether Progeny met its license condition by establishing, through field testing conducted jointly with Part 15

[4] Given that Progeny views "refraining from arguing [a] point further" as conceding a point, Opposition at 22, it has no right to complain, as it does throughout its Opposition, that Petitioners have repeated points made during the proceeding. Of course, in this instance, these points have been made to show error.

users, that its operations do not cause unacceptable levels of interference to unlicensed users.[5] Rather than analyzing the technical evidence relevant to that question, the Commission sidestepped the question and rewrote the established policy reflected in its rules and precedents regarding the intended relationship between unlicensed users and M-LMS licensees in the 902-928 MHz band. Given that policy, the Commission must require co-existence between licensed and unlicensed users - a regulatory regime that accords unlicensed users in this band more than secondary status, which is unique in the Commission's rules.[6] The clear effect of the Order is to ignore that FCC policy and upset the reasonable expectations of unlicensed users in the band.

Progeny, disingenuously, now claims in its Opposition that the usual Part 15 harmful interference standard applies to the interaction between unlicensed users and M-LMS licensees. This ignores the clear and well-established 902-928 MHz band plan that requires unlicensed users to accept harmful interference from all other licensees and unlicensed users *except* M-LMS licensees, which are required to afford unlicensed users increased protection. As WISPA points out, when establishing the M-LMS, the Commission specifically discussed the definition of harmful interference in order to contrast it with the M-LMS "unacceptable levels of interference" requirement.[7] Even the most recent FCC Order touching upon this issue, the Progeny Waiver Order, makes clear that "[i]n this band, *however*," there are "*specific interference rules* designed to maintain coexistence" including between M-LMS and unlicensed users.[8] The Order additionally makes clear that the Commission has not waived these rules.[9] For these reasons, Progeny's cherry-picked quotations, which attempt to turn the unacceptable interference standard into the harmful interference standard, should be rejected.

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[5] See Section 90.353(d).
[6] Silver Spring Petition at 2; WISPA Petition at 12-14; Utility Petition at 5.
[7] WISPA Petition at 4.
[8] *In the Matter of Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules*, Order, 26 FCC Rcd 16878 at ¶ 25 (2011) ("Progeny Waiver").
[9] *Id*.

Regardless of Progeny's extended protest that 902-928 MHz unlicensed users have no protection greater than the general no harmful interference standard, both Progeny and the Commission have failed to offer an explanation of why the Commission would have placed a license condition in its rules and sent Progeny down this path of joint testing if doing so served no purpose. That is, if 902-928 MHz unlicensed users have no rights *vis a vis* M-LMS licensees, above and beyond the secondary status to which Part 15 users are otherwise subject, why did the Commission establish a rule requiring testing as a condition only of those licenses, but not for other licenses issued for operations in the band? It is obfuscation to suggest, as Progeny does, that the purpose was to achieve a "balanced relationship" between M-LMS and unlicensed users, but that only the general rules for Part 15 operations apply.[10] As Silver Spring Networks explains, "that Part 15 users have only one safeguard against Progeny's interference is a poor excuse for nullifying even that one."[11]

In addition to ignoring the implications of the joint testing requirement, Progeny gives short shrift to the second component of the license condition – evaluating the results of the testing under the "unacceptable interference" standard. This task proves particularly elusive because that standard remains undefined, even at this point in the proceeding. Petitioners have pointed out that there is widespread confusion as to what standard the Commission has established and how it was applied in this instance. WISPA shows that the Order contains up to nine different definitions of "unacceptable levels of interference."[12] While the Coalition demonstrates that the new meaning has a "significant detrimental effect overall,"[13] Progeny argues that this phrase, stated twice in the Order, serves only to explain the Commission's conclusion that Progeny met its burden.[14] The Commission must reconsider its order to provide clarity for the unlicensed community.

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[10] Opposition at 8-10.
[11] Silver Spring Petition at 13.
[12] WISPA Petition at 1, 9-10, and 12-13.
[13] Coalition Petition at 11.
[14] Opposition at 6.

B. *The Commission Erred in Accepting Unilateral Testing and Not Requiring Progeny to Demonstrate That it Protects Unlicensed Users from Unacceptable Levels of Interference.*

The Commission committed legal error by not just accepting but relying almost exclusively on the unilateral testing conducted by Progeny.[15] The Commission's rules and orders require joint testing, previously setting out the Commission's "expectation that such testing be accomplished through close cooperation" between the parties.[16] Even in this proceeding, the Commission staff requested that certain parties engage in such joint testing. But the Commission, without explanation, abandoned this requirement and based nearly its entire decision on Progeny's unilateral testing – testing that was challenged by many and endorsed only by Progeny.[17] Progeny claims that joint testing was a mere expectation and was not required.[18] It is hard to imagine when the Commission would not require compliance when it states that it "expects" licensees to perform an action. The very definition of the term "expect" includes "a looking for as due, proper, or necessary."[19]

Regardless of what time and effort Progeny put into testing, the Commission should not have relied upon testing that was not done jointly with Part 15 users, not

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[15] Plantronics Petition at 6; WISPA Petition at 5; Utility Petition at 9; Skybridge Petition at 24-25.

[16] The record is clear that Itron did not refuse "repeated requests" for joint testing, contrary to Progeny's claims. Opposition at 18. As Itron explained in a written response to Progeny, it disagreed that Progeny's planned tests would be adequate. *See* Comments of Itron, Inc. on Progeny Test Report, WT Docket No. 11-49, at n15 (filed March 15, 2012).

[17] Of course, points made regarding the Commission's conclusions based on testing of devices that Progeny chose to test refer to this unilateral testing, not the joint testing. It is disingenuous for Progeny to suggest that the Petitioners believe that Itron, Landis+Gyr, and WISPA played no role in selecting devices for the joint testing. Opposition at 37-39.

[18] Opposition at 18. Contrary to Progeny's claim, in theProgeny Waiver Order the FCC the reaffirmed the status of cooperative testing as a pre-existing "obligation" on the part of M-LMS licensees under Section 90.353(d). Thus there was no need to include the cooperative testing requirement as an explicit condition to the waiver.

[19] Webster's New World Dictionary of the American Language, 2nd College Edition (1980).

properly conducted, and not representative of Part 15 devices or.[20] As Silver Spring Networks states, "while testing of representative devices may be sufficient to meet the field testing requirement, the selection of devices cannot be so limited as to be essentially useless."[21] Plantronics concurs, explaining that the interference protections apply to all 902-928 MHz unlicensed users and that testing should not have been limited to a small number of devices because the Commission has never suggested that "Progeny only had to mitigate interference to a subset of Part 15 devices."[22]

This is especially true given that joint testing is a threshold requirement for M-LMS licensees prior to commencing operations. It was for this reason that the Coalition and many other parties requested additional joint testing with Progeny. Progeny fails to note, and the Commission did not address, the fact that Progeny ignored a half dozen requests to test jointly devices that were not included in the limited joint testing that did occur. Nor did the Commission address the concerns raised about the quality of the unilateral testing, concerns voiced by RF engineers.[23] It thus appears that only those parties that initially complained about Progeny's flawed unilateral testing results were entitled to any cooperative testing and the rest of the world is out of luck.

While Progeny attempts to justify and bolster the Commission's conclusions that no additional testing is needed, its justifications ring hollow. For example, with regard to Taggle Systems ("Taggle"), Progeny states that Taggle did not provide any "evidence" of interference problems, attempting to dismiss Taggle's concerns by attributing their problems to the "noise floor."[24] To the contrary, Taggle filed a report with the Commission containing spectrum plots and a technical explanation, and additionally requested that Progeny engage in joint testing to determine the extent of the

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[20] As Skybridge summarizes, "Progeny manipulated its tests in ways calculated not to report the full extent of potential interference . . . . often isolating single devices at the expense of testing multiple devices, complex configurations, or even entire Part 15 systems." Skybridge Petition at 24-25.

[21] Silver Spring Petition at ¶ 15.

[22] Plantronics Petition at 4-6.

[23] *See e.g.* RKF Engineering Analysis of Progeny Part 15 Test Report, WT Docket No. 11-49 (filed March 15, 2012 as an attachment to Itron Comments)

[24] Opposition at 25 and 35.

interference problem.[25] That Progeny ignored this request to engage in joint testing and now states that Taggle did not provide any technical analysis to support its position, calls into question Progeny's responsiveness to interference concerns as required by the Order.[26]

Similarly, Progeny falsely claims that its unilateral testing included sufficient testing of repeaters similar to repeater nodes used by the alarm industry.[27] The testing, designed and conducted by Progeny alone, involved two repeaters, a number that does not represent the volume used in any system at any one time. Itron has previously explained the flaws in these Progeny-designed "systems tests," which give disproportionate amounts of weight to the test results for receivers located very close to the transmitter, a methodology that does not replicate real-world conditions of systems in which the largest proportion of receivers are located far from the transmitter.[28]

C. The Order Leaves Many Critical Issues Unresolved.

As Progeny notes, many issues have been discussed at length in this proceeding,[29] yet many critical ones are still unresolved. The intent of Petitioners in focusing on the record is to point out the many unresolved issues that, individually and as a whole, constitute error – this is far different from rehashing old arguments.

For one, the Petitioners have not suggested that the Commission should have established a bright-line rule or minimal technical thresholds for interference from M-LMS licensees, as Progeny claims. However, they as well as the public require an understanding as to what would or would not show "unacceptable levels of

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[25] Letter from Gordon Foster and Chris Andrews, Taggle Systems, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49 at 2-3 (filed March 18, 2013) and Letter from Gordon Foster and Chris Andrews, Taggle Systems, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49 at 1 (filed April 14, 2013).

[26] And, of course, this underscores the need for additional conditions to be placed on Progeny. *See* WISPA Petition at 7 and 22-24 (discussing the Coalition's requested conditions and the need for them); Silver Spring Petition at 20-12; and Plantronics Petition at 16.

[27] Opposition 43.

[28] *See e.g.* Itron, Inc. Response to Progeny Filings, WT Docket No. 11-49 at 4-5 (filed Feb. 11, 2013).

[29] Opposition at i and 27.

interference." Without this, manufacturers and users of unlicensed devices cannot know what spectrum environment to expect and thus cannot develop or maintain sound business models that rely on the 902-928 MHz spectrum. Because the Order fails to address these technical questions, the Commission must reconsider it.

Second, the Commission's conclusions regarding the design of the Progeny system are not explained or supported by the record, and are merely speculative.[30] While Progeny now asserts that its indoor service would be no different from tracking vehicles in urban environments,[31] there is no information in the record to support that assertion. As Petitioners recognize, just because Progeny has designed its system differently does not equate to its meeting its license condition, namely to verify through cooperative testing that it does not cause unacceptable levels of interference to unlicensed users.[32]

Third, the Commission and Progeny continue to err in claiming that SCADA systems were tested, despite widespread objection to this conclusion by the utility industry[33] and the existence in the record of a specific resolution passed by the National Association of Regulatory Utility Commissioners ("NARUC") specifically asking that the Commission test SCADA systems.[34] Progeny's statements in its Opposition that the Itron and Landis+Gyr devices tested were SCADA systems are particularly misplaced,[35] given Progeny's discussions with the utility community and its lack of experience with AMR and SCADA devices.

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[30] As Skybridge notes, "even the most extensive efforts to minimize interference could fail, resulting in continuing levels of interference that are 'unacceptable.' However, under the Commission's test, these minimizing efforts would be enough to make the level of interference 'acceptable.'" Skybridge Petition at 9.

[31] Progeny Opposition at 14.

[32] WISPA Petition at 14-19; Silver Spring Petition at 14; Skybridge Petition at 6-9.

[33] The Utility Petition provides a more detailed discussion of this issue, and the Comments of the Utilities Telecom Council, WT Docket No. 11-49, (filed December 21, 2012), set out initial concerns regarding Progeny's false claims in this regard.

[34] Letter from James Bradford Ramsay, NARUC General Counsel, to Hon. Julius Genachowski, Chairman, Federal Communications Commission, WT Docket No. 11-49 (filed Feb. 21, 2013).

[35] Opposition at 26.

Fourth, the Commission did not properly analyze the test data submitted in this proceeding.[36] The Commission should have scrutinized all test results and technical analyses submitted.[37]

Fifth, Progeny – and the Commission – additionally make much of the "interference mitigation techniques" used by some unlicensed devices, but again, this is supposition that these techniques are useful against Progeny's interference.[38] Of note, there is no finding reflected in the Order as to the numbers of unlicensed users that do or do not use these techniques, and the Commission disregards portions of the record that indicate that not all unlicensed devices employ these techniques.[39]

Finally, Progeny continues to obscure the extent of its "operations,"[40] making it appear that it has been operating as a fully built out systems in all 40 markets, while the fact is that Progeny has completed minimal construction in 39 markets only to meet its build out requirements, and most certainly has not been providing any service in these markets.[41] The Commission should not have accepted Progeny's claims at face value given the countervailing information in the record.

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[36] Silver Spring Petition at 14-16; WISPA Petition at ii and 7; Plantronics Petition at 11; and Skybridge Petition at 11 ("the FCC rejected substantial evidence that interference to Part 15 devices is occurring.").

[37] Neither the Commission nor Progeny mention the existence of Itron's second round of testing, which was filed in the record in December 2012 and provides additional evidence regarding the Progeny system. Itron Second Round Test Results, WT Docket No. 11-49 (filed Dec. 17, 2012).

[38] Progeny repeats a statement that Itron already has disproved, to wit that the joint Itron-Progeny test results show that Part 15 devices can cause greater interference than Progeny. Opposition at 27-28. In fact, an examination of the underlying data –shows that this "line" was equipment error and not interference from other unlicensed devices. Moreover, Itron has provided a comprehensive showing it the record that Progeny's charts and technical claims are not reliable. *See* Itron, Inc. Response to Progeny Filings, WT Docket No. 11-49 at 3 (filed Feb. 11, 2013).

[39] *See* Comments of the Part 15 Coalition, WT Docket No. 11-49 at 6 (filed Dec. 21, 2012).

[40] Opposition at 34.

[41] Letter from Henry Goldberg, Attorney for Itron, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49 (filed March 4, 2013) (explaining that "Itron, during the course of its normal operations in many markets, has not encountered Progeny operations sufficient to provide service in any market but San Jose. While Itron has 'seen' the odd Progeny transmitter in some markets, there are not a sufficient number of them

CONCLUSION

The Commission must reconsider its Progeny Order in light of the errors detailed in the Petitions for Reconsideration filed in this proceeding. Progeny should not be allowed to operate absent comprehensive, joint testing, adequate review of the test results, and a clear statement of the interference standard that Progeny must meet to satisfy its license conditions.

Respectfully submitted,

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to provide service."). Since Progeny never specifically refuted this point, based on its views expressed on page 22 of its Opposition, one must conclude that it concedes it.

CERTIFICATE OF SERVICE

I, Deborah Wiggins, hereby certify that on this 2nd day of August, 2013, I served a copy of the foregoing The Part 15 Coalition Reply to Opposition to Petitions for Reconsideration, by U.S. mail, postage pre-paid, on the following:

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